

Diabetes: signs, prevention and treatment

There are 20.8 million children and adults in the United States, or 7% of the population, who have diabetes, according to the American Diabetes Association. Diabetes is a disease in which the body does not produce or properly use insulin – a hormone needed to convert sugar, starches and other food into energy.

Types of diabetes

Type 1 diabetes results from the body's failure to produce insulin, a hormone that allows glucose to fuel the cells. This increases your risk for serious complications such as heart disease, blindness, nerve damage, and kidney damage. Type 1 diabetes is most frequently diagnosed in children and young adults and was previously known as juvenile diabetes. It is estimated that 5% to 10% of Americans who are diagnosed with diabetes have Type 1 diabetes.

Type 2 diabetes results from insulin resistance (a condition in which the body fails to properly use insulin), combined with relative insulin deficiency. Insulin is necessary for the body to be able to use sugar. When glucose builds up in the blood instead of going into cells, it can cause two problems:

- Your cells may be starved for energy,
- Over time, high blood glucose levels may hurt your eyes, kidneys, nerves or heart.

Most Americans who are diagnosed with diabetes have Type 2 diabetes.

What causes diabetes?

There is still much we do not know about the causes of diabetes. Both genetics and environmental factors, such as obesity and lack of exercise appear to play a role. The causes of diabetes typically differ based on the type of diabetes you have.

Type 1 diabetes is thought to be related to environmental factors, such as certain types of viral infections. Type 1 diabetes is most common in people of Northern European descent, followed by African Americans and Hispanic Americans. It is relatively rare in those of Asian descent. Type 1 diabetes is also slightly more common in men than in women.

Type 2 diabetes is believed to have a strong genetic link, meaning that it tends to run in families. Several genes are being studied that may be related to the cause of Type 2 diabetes. Risk factors for developing Type 2 diabetes include the following:

- High blood pressure and/or high blood triglyceride (fat) levels

- Gestational diabetes or giving birth to a baby weighing more than nine pounds
- High-fat diet
- High alcohol intake
- Sedentary lifestyle
- Obesity or overweight

Certain ethnic groups, such as African Americans, Native Americans, Hispanic Americans, and Japanese Americans, have a greater risk of developing Type 2 diabetes than people of Northern European descent. Increasing age is also a significant risk factor for Type 2 diabetes. Risk begins to rise significantly at about age 45 years, and rises considerably after age 65 years.

Symptoms of diabetes

Diabetes often goes undiagnosed because its symptoms can seem to be minor. Some symptoms may include:

- Excessive thirst
- Frequent urination
- Extreme hunger
- Unusual weight loss
- Fatigue
- Irritability
- Blurry vision

If you have one or more of these symptoms, you should tell your doctor. The American Diabetes Association offers an Online Diabetes Risk Test to find out if you are at risk for diabetes. Go to diabetes.org/risk-test.

Detecting diabetes

In order to determine whether or not a patient has diabetes, health care providers conduct a Fasting Plasma Glucose Test (FPG) or an Oral Glucose Tolerance Test (OGTT). Either test can be used to diagnose diabetes. The American Diabetes Association recommends the FPG because it is easier, faster, and less expensive to perform.

Treating diabetes

The treatment of diabetes is highly individualized, depending on the type of diabetes, whether you have other medical problems, whether you have diabetes complications, and your age and general health.

Effective management of diabetes requires healthy lifestyle choices in diet, exercise, and other health habits. These will help to improve glycemic (blood sugar) control and prevent or minimize complications from diabetes. Your doctor may also prescribe insulin or oral medications to help manage your diabetes.

Education about diabetes and its treatment is essential. When you are first diagnosed with diabetes, your doctor and treatment team will spend a lot of time with you, teaching you about your condition, your treatment, and everything you need to know to care for yourself on a daily basis.

About insulin

Inside the pancreas, beta cells make the hormone insulin. With each meal, beta cells release insulin to help the body use or store the blood glucose it gets from food. In people with Type 1 diabetes, the pancreas no longer makes insulin. The beta cells have been destroyed and they need insulin shots to use glucose from meals. People with Type 2 diabetes can produce insulin, but their bodies don't respond well to it. Some people with Type 2 diabetes need diabetes pills or insulin shots to help their bodies use glucose for energy. Insulin cannot be taken as a pill. The insulin would be broken down during digestion just like the protein in food. Insulin must be injected into the fat under your skin for it to get into your blood.

For more information

If you or someone you care for has recently been diagnosed with diabetes, you are no doubt experiencing a range of emotions. You are not alone. Don't panic. Diabetes is serious, but people with diabetes can live long, healthy, happy lives.

If you are a Blue Shield member and have questions about diabetes or its prevention, you can talk or chat online with a registered nurse day or night, through Blue Shield's NurseHelp 24/7sm. Call **(866) 543-3728** or visit [blueshieldca.com](https://www.blueshieldca.com) and click on *Health & Wellness*.